

## IN THE SPECIFICATION

Please enter the following amendments in the *Specification* as originally filed. No new matter is introduced by the amendments to the *Specification* filed, as all amendments are provided to correct clerical errors.

*1. Please amend the following sentence of paragraph 32 of the Specification as set forth in Publication No. 2005/0029872 as follows:*

[0032] To summarize, there are several key operation features of the boost converter circuit 60. It is inactive when input voltage  $V_{in}$  is sufficient to allow further back end regulation (for example, above 24 V DC). Fundamental to the unique capability of the power supply board 10 to support a wide-input supply range (for example, 10V to 100V), the boost converter circuit 60 is selectively active to permit the power supply to provide high-efficiency regulation at low input voltage levels. For input voltage levels below a selected value (such as 24 V DC), the boost converter circuit is activated. During activation, the boost converter circuit raises the input voltage at node D to an intermediate voltage level (for example, 27 V DC, even in the event of a low line dip or momentary power loss) which can be efficiently regulated by the back end of the power supply block 62 (to be discussed below). Critical to this operation is a switching regulator for voltage step-up operation which operates in accordance with the principles of pulse width modulation (PWM) such that the boosted output voltage is controlled or varied by modulation of duty ratio. At input voltage levels above the selected value (for example, 24 V DC), the boost converter circuit is inactive and is bypassed in essence passing the received voltage  $V_{in}$  from the input protection circuit through to the back end of the voltage converter operation where a plurality of discrete voltages are generated (see discussion below). Inactivating the boost converter circuit at higher voltage levels permits the supply ~~[[the]]~~ to retain high efficiency at high input voltage levels. Critical to this operation is the voltage comparison operation as tied to the PWM operation such that the switching regulator function is terminated when the input voltage exceeds a predetermined reference voltage set by the circuit components. These unique features permit uninterrupted power to be provided to the voltage output without the use of an auxiliary battery within the power supply.

2. Please amend paragraphs 30 and 31 of the Specification as set forth in Publication No. 2005/0029872 as follows:

[0030] The selective boost converter circuit 60 includes a pulse width modulation circuit 64 (for example, a UCC2803 PWM integrated circuit). A voltage divider ~~[[66]]~~ 67 is connected to node D and supplies a boost voltage feedback ( $V_{fb}$ ) to the circuit 64. A reference voltage ( $V_{ref}$ ) is also received by the circuit 64 (for example, as derived from the output of the regulator circuit 40). If  $V_{fb} > V_{ref}$ , then the circuit 64 is turned off. This occurs when the voltage level at node D is sufficiently high (for example, at or above 27 V DC) to power the back end of the power supply block. If  $V_{fb} < V_{ref}$ , however, the circuit 64 is turned on and the selective boost converter circuit 60 functions to boost the voltage level at node D to a sufficient level for back end operation. This voltage boosting operation is effectuated as follows: circuit 64 regulates the PWM duty cycle of a signal controlling transistor 66 in response to the  $V_{fb}/V_{ref}$  comparison. When transistor 66 is on, node C is pulled to ground increasing the current flow in inductor 24 (FIG. 2A). Diode 68 prevents capacitors 26 and 28 from discharging to ground when transistor 66 is turned on. When transistor 66 then turns off, the current in the inductor 24 is dumped through diode 68 into the capacitors 26 and 28 to increase their voltage level (which appears at node D and is measured by the voltage divider ~~[[66]]~~ 67). It can accordingly be seen how the boost converter circuit 60 and the input protection circuit 20 share components.

[0031] The boost converter circuit 60 further includes a feedback compensation circuit 70 that assists in maintaining the  $V_{fb}$  voltage. A voltage limiter circuit 72 is connected to the output of the voltage divider ~~[[66]]~~ 67 to limit the  $V_{fb}$  voltage such that it never exceeds a threshold beyond which damage to the circuit 64 may occur. A current sensor 74 is connected to the transistor 66, with the sensor output connected to the circuit 64. Responsive to this current sensor signal, the circuit 64 decides when to turn off the transistor 66 and thus acts to limit the peak current that can be drawn from  $V_{in}$  (through node C and inductor 24) to a certain threshold.